Provincial Report

Grade 12 Diploma Examinations
June 1985 Administration

September 1985

This report contains the statistical summary of the provincial results for the June 1985 administration of the Grade 12 diploma examinations in English 30, English 33, Social Studies 30, Mathematics 30, Biology 30, Chemistry 30, and Physics 30.

Student Evaluation

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The Conference of Alberta School Superintendents
The Universities Co-ordinating Council
The Public Colleges of Alberta
Alberta Education

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George Bevan
Director
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SECTION 1: GRADE 12 DIPLOMA EXAMINATIONS PROGRAM

Introduction

The Grade 12 Diploma Examinations Program, an integral part of the high school diploma requirements, is intended to develop and maintain excellence in educational standards through certification of academic achievement. All Grade 12 students in Alberta are now required to write at least ONE diploma examination to receive a high school diploma. Also, mature students may receive credits for a Grade 12 course by writing the appropriate diploma examination without registering in the course.

The Diploma Examinations Program consists of course-specific examinations that are based on the prescribed *Program of Studies for Senior High Schools* for the following Grade 12 courses: English 30, English 33, Social Studies 30, Mathematics 30, Biology 30, Chemistry 30, and Physics 30. Except for English 30 and English 33, the diploma examinations are available in French translation on request. The diploma examinations are administered three times yearly, in January, June, and August.

Alberta Education issues two distinct high school diplomas: the General High School Diploma and the Advanced High School Diploma.

General High School Diploma

To earn a General High School Diploma, a student must obtain course credit in either English 30 or English 33 and obtain 100 credits distributed over courses as specified in the *Junior-Senior High School Handbook*. Some students who are working toward the general diploma may wish to obtain credits in other diploma examination courses (i.e., Social Studies 30, Mathematics 30, Biology 30, Chemistry 30, and Physics 30). To obtain credits in these courses, the appropriate diploma examination must be written.

Advanced High School Diploma

The Advanced High School Diploma represents achievement in an academic program that includes language arts (English), social studies, mathematics, and science. To earn an Advanced High School Diploma, a student must satisfy the current course and credit requirements for a General High School Diploma, and obtain course credits in English 30, Social Studies 30, Mathematics 30, and ONE of Biology 30, Chemistry 30, or Physics 30.

Awarding of Course Credits

Grade 10 and Grade 11 Courses. To obtain credits in Grade 10 (10-level) and Grade 11 (20-level) courses, a student must earn a final mark of 40% or better. A student who has achieved a mark of 50% or higher in a given course is eligible to take the next or higher-rank high school course in that sequence.

Grade 12 Courses. To obtain credit in a Grade 12 (30-level) course, a student must earn a final mark of 50% or better. To obtain credit in a Grade 12 diploma examination course, a student must write the appropriate diploma examination and attain a final blended mark of 50% or better. The final blended mark is made up of 50% of the mark awarded by the school and 50% of the diploma examination mark. For example, a student taking Physics 30 might have a mark of 45% from his school and a mark of 57% on the diploma examination. This student would earn credits for Physics 30 because the final mark would be 51%, which is the average of the school and examination marks. For mature students who do not have a school mark or who have a school mark lower than the examination mark, the examination mark is the final mark.

Award of Excellence

When candidates for an Advanced High School Diploma obtain a final average of 80% or higher on the four required diploma examination courses with not less than 65% in any one of these four required courses, they receive an Award of Excellence. This Award of Excellence is noted on the student's Advanced High School Diploma.

When a student writes two or three of the diploma examinations in Biology 30, Chemistry 30, and Physics 30, the highest of these final course marks is used for diploma purposes and in the calculation of the average for the Award of Excellence.

SECTION 2: ENGLISH 30 DIPLOMA EXAMINATION

The English 30 Diploma Examination consists of two parts: Part A: Written Response and Part B: Reading (Multiple Choice), each worth 50% of the total examination mark.

Table 1 contains percentage distributions for school-awarded marks, diploma examination marks, and final blended marks in English 30. Table 2 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages are based on raw scores, which are the number of marks obtained on each part of the examination. The total marks possible are identified for the written-response and multiple-choice components.

Averages are based on the results achieved by 12 664 students. Differences between total averages and component averages are due to rounding.

Table 1

Provincial Percentages of A, B, C, and F Grades, Averages and Standard Deviation of Scores
English 30

Score	School-Awarded Mark	Diploma Examination Mark	Final Blended Mark
A (80–100%)	11.4	8.7	7.9
B (65–79%)	38.5	35.7	38.9
C (50–64%)	41.4	42.5	46.9
F (0–49%)	8.7	13.1	6.3
Average (%)	64.2	62.8	63.9
Standard Deviation	11.9	12.1	10.8

Table 2

Multiple Choice and Written Response Raw Score Totals
English 30

Examination Section	Total Marks	Weighting (%)	Average	Standard Deviation
Part A: Written Response	50	50	30.1	7.0
Part B: Multiple Choice	79	50	51.5	10.7

Table 3

June 1985 English 30 Diploma Examination Blueprint
Part A: Written Response

Description of the Writing Assignment	Reporting Category	Proportion of Total Mark
Minor Assignments		
The two writing assignments are connected to the reading of literary selections contained in the examination. In Assignment One, the student is required to respond to the selections in a personal context. In Assignment Two, the student is required to understand, analyze, and evaluate techniques used in literature and to synthesize thoughts clearly and correctly in writing.	1. Thought & Detail	10%
	2. Writing Skills	5%
Major Assignment		
The writing assignment sets a specific writing task, but allows the student to choose the method of development and to select supporting details from personal experience with literature that has been studied. The writing assignment is generated from literary selections and requires the student to understand literal and implied meanings and to synthesize thoughts clearly and correctly in writing.	1. Total Impression	5%
	2. Thought & Detail	15%
	3. Organization	5%
	4. Matters of Choice	5%
	5. Matters of Convention	5%
		50%

Table 4

Percentage Distribution of Scores on English 30 Part A
Minor Assignments (Personal Response and Critical Response)

Score Scale Points	Personal Response Reporting Category		Critical Response Reporting Category	
	Thought & Detail	Writing Skills	Thought & Detail	Writing Skills
5 (Exceptional)	3.3	3.8	2.8	3.2
4 (Proficient)	24.9	35.1	19.9	29.9
3 (Satisfactory)	58.8	51.9	42.7	54.4
2 (Limited)	10.1	7.0	26.8	8.0
1 (Poor)	1.3	0.6	4.5	0.9
0 (Insufficient or no response)	1.6	1.6	3.5	3.5

Table 5

Percentage Distribution of Scores on English 30 Part A
Major Assignment

Score Scale Points	Reporting Category				
	Total Impression	Thought and Detail	Organi-zation	Matters of Choice	Matters of Convention
5 (Exceptional)	2.9	3.1	3.5	3.9	5.9
4 (Proficient)	18.0	16.4	22.7	23.5	34.7
3 (Satisfactory)	52.9	43.5	56.4	57.5	47.0
2 (Limited)	23.0	31.6	15.0	12.6	9.8
1 (Poor)	2.0	4.2	1.3	1.3	1.4
0 (Insufficient or no response)	1.2	1.2	1.2	1.2	1.2

Table 6

June 1985 English 30 Diploma Examination Blueprint
Part B: Reading (Multiple Choice)

Reporting Category	Questions by Cognitive Level: Literal Understanding	Inference and Application	Evaluation	Exam Emphasis
Meanings	4,23,41,45, 49,16	6,9,12,21,24, 29,33,35,36, 38,39,42,54, 55,61,63,65, 75,76,77,79,	2,8,15, 32,52,59, 66	21%
Critical Response		1,10,13,17, 19,20,26,27, 28,47,51,53, 56,62,70,74, 80	7,31*,46, 48,50,57, 73,78	16%
Human Experience and Values	69	3,11,14,22, 25,34,37,43, 44,59,64,67, 71,72	5,18,30, 40,58,60	13%
Exam Emphasis	4%	32%	13%	50%

*Question 31 was deleted from the examination.

Table 7

Raw Score Results for English 30 Part B

Reporting Category	Average	Standard Deviation
1. Meanings (34 questions)	22.2	5.0
2. Critical Response (24 questions)	16.5	3.4
3. Human Experience and Values (21 questions)	12.9	3.6

Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 8. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 8

Results for Individual Multiple-Choice Questions
English 30

Item	Key	Distribution of Responses in %*				Item	Key	Distribution of Responses in %*			
		A	B	C	D			A	B	C	D
1	D	10.3	5.6	2.6	81.5	41	C	8.5	15.7	47.3	28.4
2	B	13.3	54.7	17.9	14.0	42	B	7.6	62.7	15.9	13.7
3	B	23.3	69.2	3.1	4.4	43	D	19.2	11.6	4.1	65.0
4	A	60.3	19.8	11.3	8.6	44	A	79.7	8.9	7.0	4.5
5	C	1.7	9.6	66.8	21.8	45	C	19.7	32.6	45.4	2.2
6	A	75.4	10.4	12.5	1.7	46	D	2.0	2.5	2.8	92.7
7	A	40.4	4.1	34.8	20.8	47	B	29.1	51.0	8.0	11.9
8	B	2.1	86.5	8.0	3.5	48	C	8.3	7.7	76.5	7.5
9	A	72.8	15.5	3.0	8.5	49	D	13.6	8.2	27.1	50.9
10	B	11.6	81.2	3.3	4.0	50	C	4.6	4.8	86.9	3.6
11	B	20.8	64.6	11.5	3.0	51	B	14.1	64.4	13.9	7.5
12	A	80.4	4.3	10.4	4.9	52	C	23.3	7.8	65.9	3.0
13	A	50.0	24.8	13.8	11.2	53	B	6.7	62.7	14.8	15.7
14	B	10.7	62.9	13.6	12.7	54	A	67.2	4.4	20.6	7.7
15	D	4.7	9.0	12.9	73.4	55	B	7.5	76.1	11.2	5.2
16	A	68.9	6.3	16.4	8.3	56	C	13.8	8.8	74.2	3.2
17	A	50.1	7.0	36.8	6.0	57	D	18.6	5.9	11.0	64.4
18	C	12.0	10.7	65.6	11.6	58	D	10.1	8.4	10.4	71.0
19	D	0.6	2.0	6.6	90.8	59	B	8.1	76.7	10.3	4.8
20	D	6.3	14.9	3.8	75.0	60	C	36.9	12.8	36.3	13.8
21	A	75.9	1.1	3.7	19.2	61	D	7.2	8.2	9.9	74.7
22	A	57.7	23.9	4.9	13.5	62	D	17.3	9.1	5.6	68.0
23	A	87.5	3.4	3.4	5.7	63	B	11.5	58.3	24.6	5.4
24	C	4.0	0.8	73.3	21.8	64	B	39.2	34.7	8.0	18.1
25	A	59.6	7.9	10.6	21.8	65	A	57.3	19.5	15.5	7.7
26	D	2.0	2.3	2.0	93.7	66	D	8.6	21.8	12.6	56.8
27	C	7.5	34.4	55.2	2.9	67	B	9.9	64.3	21.3	4.2
28	C	6.7	20.9	51.2	21.3	68	C	9.7	4.6	71.7	13.8
29	D	13.2	25.7	1.6	59.4	69	C	16.8	10.3	60.2	12.6
30	B	7.7	84.1	4.7	3.4	70	B	11.4	59.3	6.7	22.6
31	-	-	-	-	-	71	C	6.3	14.2	58.3	21.0
32	A	63.9	6.7	17.9	11.5	72	C	20.7	2.8	67.8	8.7
33	C	5.5	4.2	87.5	2.6	73	D	5.8	16.8	13.2	64.0
34	C	5.8	17.1	36.2	40.8	74	D	16.4	1.6	6.7	75.0
35	A	74.2	5.4	5.9	14.5	75	B	20.8	44.2	23.5	11.0
36	B	5.6	78.9	5.9	9.5	76	B	4.1	59.0	19.6	16.9
37	C	21.9	6.9	60.6	10.6	77	B	40.8	42.4	5.4	11.0
38	C	10.0	8.4	74.3	7.3	78	A	57.2	14.6	12.6	15.2
39	B	9.4	49.8	28.7	12.1	79	D	3.9	11.5	40.5	43.6
40	D	10.7	39.2	12.6	37.4	80	D	5.4	10.4	4.4	79.3

*The sum of the percentages for each question may be less than 100% because the No Response category is not included. This category is not greater than 0.5% for any question.

SECTION 3: ENGLISH 33 DIPLOMA EXAMINATION

The English 33 Diploma Examination consists of two parts: Part A: Written Response and Part B: Reading (Multiple Choice), each worth 50% of the total examination mark.

Table 9 contains percentage distributions for school-awarded marks, diploma examination marks, and final blended marks in English 33. Table 10 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages are based on raw scores, which are the number of marks obtained on each part of the examination. The total marks possible are identified for the written-response and multiple-choice components.

Averages are based on the results achieved by 6352 students. Differences between total averages and component averages are due to rounding.

Table 9

Provincial Percentages of A, B, C, and F Grades, Averages and Standard Deviation of Scores
English 33

Score	School-Awarded Mark	Diploma Examination Mark	Final Blended Mark
A (80-100%)	3.1	7.0	3.1
B (65-79%)	29.8	42.2	35.7
C (50-64%)	52.2	38.3	54.0
F (0-49%)	14.8	12.5	7.1
Average (%)	59.2	63.4	61.8
Standard Deviation	10.9	11.5	9.5

Table 10

Multiple Choice and Written Response Raw Score Totals
English 33

Examination Section	Total Marks	Weighting (%)	Average	Standard Deviation
Part A: Written Response	50	50	31.7	5.3
Part B: Multiple Choice	65	50	41.2	10.1

Table 11

June 1985 English 33 Diploma Examination Blueprint
Part A: Written Response

Description of the Writing Assignment	Reporting Category	Proportion of Total Mark
Personal Response to Literature The student is required to read a short literary selection that serves as a stimulus for a personal or reflective response.	1. Thought & Detail	10%
	2. Organization	5%
	3. Matters of Choice	5%
	4. Matters of Convention	5%
Functional Writing The student is required to write for a specified purpose and audience.	1. Thought & Detail	10%
	2. Matters of Choice	2.5%
	3. Matters of Convention	2.5%
Response to Visual Communication Writing assignments are connected to a cartoon or other visual stimulus. The student is required to write about main ideas, techniques of communication, and personal reactions.	1. Thought & Detail	5%
	2. Matters of Convention	5%
		50%

Table 12

Percentage Distribution of Scores on English 33 Part A
Section I: Personal Response to Literature

Score Scale Points	Reporting Category			
	Thought & Detail	Organization	Matters of Choice	Matters of Convention
5 (Proficient)	2.1	2.3	2.4	5.0
4 (Capable)	28.2	29.3	28.6	41.2
3 (Adequate)	57.0	61.4	59.3	40.6
2 (Limited)	11.9	6.4	8.7	11.8
1 (Poor)	0.6	0.2	0.7	1.1
0 (Insufficient or no response)	0.3	0.3	0.3	0.3

Table 13

Percentage Distribution of Scores on English 33 Part A
Section II: Functional Writing

Score Scale Points	Reporting Category		
	Thought & Detail	Matters of Choice	Matters of Convention
5 (Proficient)	1.1	1.7	4.3
4 (Capable)	16.4	23.3	34.8
3 (Adequate)	64.0	60.5	45.3
2 (Limited)	17.4	13.6	13.9
1 (Poor)	0.8	0.6	1.3
0 (Insufficient or no response)	0.3	0.3	0.3

Table 14

Percentage Distribution of Scores on English 33 Part A
Section III: Response to Visual Communication

Score Scale Points	(Question 1) Reporting Category		(Question 2) Reporting Category	
	Thought & Detail	Matters of Convention	Thought & Detail	Matters of Convention
5 (Proficient)	3.3	5.6	2.0	4.4
4 (Capable)	30.2	37.2	17.4	32.1
3 (Adequate)	48.7	42.2	36.5	43.0
2 (Limited)	13.6	12.4	28.3	13.1
1 (Poor)	3.2	1.5	10.8	2.2
0 (Insufficient or no response)	1.0	1.0	5.1	5.1

Table 15

June 1985 English 33 Diploma Examination Blueprint
Part B: Reading (Multiple Choice)

Reporting Category	Questions by Cognitive Level: Literal Understanding	Inference and Application	Evaluation	Exam Emphasis
Meanings	5,38,47, 50,62	8,9,10,11,12, 17,19,34,35, 49,51,52,53, 63,65	13,45, 60,64	18.5%
Relationships of Form and Content		1,2,3,4,36, 37,43,48,61,	6,14,44,46	10%
Human Experience and Values	16	7,15,18,20, 21,22,23,24, 25,39,40,41, 42,54		11.5%
Life Skills	29,30,33,58	27,32,55,56, 57,59	26,28,31	10%
Exam Emphasis	7.5%	34%	8.5%	50%

Table 16

Raw Score Results for English 33 Part B

Reporting Category	Average	Standard Deviation
1. Meanings (24 questions)	16.1	4.2
2. Relationships: Form & Content (13 questions)	8.0	2.8
3. Human Experience and Values (15 questions)	9.8	2.9
4. Life Skills (13 questions)	7.3	2.2

Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 17. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 17

Results for Individual Multiple-Choice Questions
English 33

Item	Key	Distribution of Responses in %*				Item	Key	Distribution of Responses in %*			
		A	B	C	D			A	B	C	D
1	A	85.1	6.7	3.0	5.2	34	A	73.7	15.8	5.8	4.7
2	A	43.2	14.8	33.9	7.7	35	B	15.0	68.3	7.5	9.1
3	A	50.3	8.1	17.6	23.9	36	C	15.4	10.1	71.7	2.7
4	B	4.0	56.1	13.4	26.3	37	B	9.1	57.8	19.4	13.7
5	A	84.5	3.2	4.5	7.8	38	A	61.5	5.9	28.5	4.0
6	B	13.3	59.4	14.7	12.4	39	B	5.1	86.5	4.1	4.1
7	B	9.7	45.6	32.7	12.0	40	C	8.7	9.0	58.8	23.4
8	C	4.2	6.2	75.0	14.6	41	D	21.3	7.2	9.3	62.1
9	B	3.9	77.8	7.7	10.6	42	C	4.8	17.3	75.9	1.8
10	B	5.0	84.2	5.1	5.7	43	C	4.2	20.5	65.3	9.9
11	C	5.5	5.4	81.0	8.1	44	D	9.8	8.1	7.0	75.0
12	D	9.1	4.3	7.6	79.0	45	C	17.8	3.3	69.5	9.4
13	B	5.9	77.7	2.9	13.4	46	A	57.5	19.2	9.8	13.4
14	C	15.1	10.2	61.8	12.8	47	B	4.2	72.7	12.3	10.6
15	D	2.9	9.7	32.8	54.6	48	D	7.2	32.2	11.9	48.5
16	B	22.0	56.6	8.4	13.0	49	D	15.3	27.2	9.6	47.7
17	A	39.5	4.5	15.5	40.4	50	A	77.0	4.3	9.5	9.1
18	A	70.9	6.3	9.5	13.2	51	B	13.5	57.1	13.9	15.3
19	D	12.8	10.6	10.8	65.7	52	C	34.9	5.5	36.9	22.6
20	D	12.6	2.4	7.6	77.3	53	B	19.4	55.2	7.2	18.0
21	A	58.6	9.8	18.0	13.6	54	D	17.7	26.7	4.4	51.0
22	D	12.9	6.1	7.5	73.4	55	A	45.8	27.0	10.3	16.6
23	C	10.6	7.5	60.2	21.7	56	D	0.8	8.4	28.2	62.4
24	D	9.3	13.1	7.7	69.7	57	A	16.2	14.0	12.8	56.7
25	C	9.0	4.4	78.3	8.4	58	B	29.1	38.2	30.5	1.9
26	B	43.0	51.2	4.4	1.3	59	C	15.3	22.8	51.0	10.6
27	C	1.2	8.4	83.4	6.9	60	C	7.9	13.3	64.3	13.7
28	C	4.8	16.4	60.3	18.5	61	C	11.5	13.1	71.6	3.3
29	A	79.2	4.6	3.5	12.7	62	B	9.9	79.4	6.9	3.2
30	D	35.3	5.3	9.2	50.1	63	C	15.2	7.7	61.0	15.5
31	B	7.1	65.7	6.6	20.6	64	D	12.9	16.5	11.7	58.3
32	A	57.6	18.0	19.1	5.3	65	D	23.6	12.8	4.1	58.8
33	D	7.0	10.5	13.2	69.2						

*The sum of the percentages for each question may be less than 100% because the No Response category is not included. This category does not exceed 0.7% for any question.

SECTION 4: SOCIAL STUDIES 30 DIPLOMA EXAMINATION

The Social Studies 30 Diploma Examination consists of both multiple-choice questions (worth 70% of the total examination mark) and written-response questions (worth 30% of the total examination mark).

Table 18 contains percentage distributions for school-awarded marks, diploma examination marks, and final blended marks in Social Studies 30. Table 19 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages are based on raw scores, which are the number of marks obtained on each part of the examination. The total marks possible are identified for the written-response and multiple-choice components.

Averages are based on the results achieved by 10 977 students. Differences between total averages and component averages are due to rounding.

Table 18

Provincial Percentages of A, B, C, and F Grades, Averages and Standard Deviation of Scores
Social Studies 30

Score	School-Awarded Mark	Diploma Examination Mark	Final Blended Mark
A (80-100%)	14.0	9.9	10.4
B (65-79%)	38.3	35.5	37.7
C (50-64%)	39.5	35.8	42.6
F (0-49%)	8.2	18.7	9.3
Average (%)	65.0	62.1	63.9
Standard Deviation	12.2	13.6	12.0

Table 19

Multiple Choice and Written Response Raw Score Totals
Social Studies 30

Examination Section	Total Marks	Weighting (%)	Average	Standard Deviation
Written Response	30	30	15.6	4.4
Multiple Choice	69	70	45.6	10.6

Table 20

June 1985 Social Studies 30 Diploma Examination Blueprint
Part A: Multiple Choice

Content Category	Questions by Process Category					Exam Emphasis
	Recall & Comp.	Inquiry Skills A[1]	Inquiry Skills B[2]	Inquiry Skills C[3]	Valuing Skills	
Value Concepts competing values & value positions - Topic A - Topic B	10,34, 36,70				14,25, 47,37	8%
Political and Economic Systems facts, concepts, & generalizations	1,2,3, 4,5,6, 9,11, 12,13, 19,20, 21,22, 26,35	15,16, 27	7,8,17, 23,24, 28,31, 32,33	18,29, 30		31%
Co-operation & Conflict Among States facts, concepts, & generalizations	42,43, 44,45, 46,49, 50*,51, 52,53, 54,55, 57,60, 61,63	62,64, 65	38,39, 40,48, 56,58, 59,66, 67	41,68, 69		31%
Examination Emphasis	36%	6%	18%	6%	4%	70%

*Question 50 was deleted from the examination.

[1]Inquiry Skills A -- Identify and focus on the issue and formulate research questions.

[2]Inquiry Skills B -- Gather, organize, analyze, evaluate, and synthesize data.

[3]Inquiry Skills C -- Resolve the issue, apply the decision, and evaluate decision, process, and action.

Table 21

Raw Score Results for Social Studies 30 Part A

Reporting Category	Average	Standard Deviation
1. Recall & Comprehension (31 questions)	19.9	5.3
2. Inquiry Skills: Identify Issue (6 questions)	4.2	1.2
3. Inquiry Skills: Gather & Use Data (18 questions)	12.3	3.1
4. Inquiry Skills: Resolve & Decide (6 questions)	4.0	1.4
5. Valuing (8 questions)	5.3	1.7
6. Political & Economic Systems (35 questions)	23.1	5.8
7. Co-operation & Conflict (34 questions)	22.5	5.6

Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 22. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 22

Results for Individual Multiple-Choice Questions
Social Studies 30

Item	Key	Distribution of Responses in %*				Item	Key	Distribution of Responses in %*			
		A	B	C	D			A	B	C	D
1	C	1.9	6.7	91.0	0.4	36	A	66.0	13.3	14.3	6.3
2	C	9.4	6.0	82.0	2.6	37	A	70.6	6.4	10.4	12.5
3	A	73.0	7.9	15.7	3.3	38	C	1.7	17.7	54.5	26.0
4	D	8.6	9.9	9.5	71.8	39	B	16.4	57.2	15.3	11.0
5	B	6.8	81.6	8.9	2.7	40	A	63.0	17.7	5.5	13.7
6	C	3.1	3.9	82.8	10.1	41	C	13.9	18.4	56.4	11.3
7	B	0.7	97.6	1.4	0.3	42	A	57.6	11.7	7.2	23.5
8	D	40.9	6.5	5.3	47.3	43	D	19.9	17.4	21.3	41.4
9	B	5.9	66.2	14.9	12.9	44	D	9.1	4.1	26.0	60.7
10	B	3.0	48.2	22.0	26.7	45	B	17.8	50.0	18.7	13.5
11	D	12.2	7.6	42.0	38.2	46	A	44.8	6.8	19.2	29.2
12	C	7.5	29.2	49.8	13.5	47	A	46.9	23.5	4.8	24.8
13	B	14.9	64.6	15.2	5.2	48	D	2.3	3.1	7.5	87.0
14	D	8.7	1.6	4.1	85.7	49	B	14.3	71.6	9.6	4.5
15	C	9.5	3.5	79.6	7.3	50	-	-	-	-	-
16	D	8.5	1.6	9.7	80.2	51	A	57.7	24.1	14.2	3.9
17	B	10.7	76.0	7.0	6.3	52	D	12.5	9.7	4.7	73.1
18	A	64.6	11.2	13.0	11.0	53	B	31.0	58.0	8.4	2.6
19	A	74.4	14.6	4.7	6.3	54	B	30.0	36.0	21.7	12.2
20	D	10.0	13.3	17.8	58.8	55	D	13.1	5.4	18.0	63.4
21	D	22.9	13.6	9.7	53.7	56	C	12.8	1.3	75.1	10.7
22	A	77.7	6.9	11.2	4.1	57	B	15.8	68.1	9.1	7.0
23	D	16.4	5.7	1.9	76.0	58	A	72.3	6.0	18.1	3.5
24	A	54.8	3.0	35.2	7.1	59	B	5.1	63.4	20.3	11.2
25	C	11.7	12.6	64.5	11.1	60	C	9.1	10.2	77.7	3.0
26	A	81.9	7.6	3.4	7.0	61	B	18.5	63.5	8.6	9.4
27	C	17.2	17.4	41.5	23.9	62	D	2.7	15.6	9.0	72.6
28	A	85.0	6.4	4.7	3.8	63	D	4.3	5.6	5.9	84.1
29	B	5.8	40.6	7.2	46.3	64	B	4.7	90.9	2.9	1.5
30	A	68.0	21.7	6.5	3.7	65	C	4.6	23.5	52.4	19.3
31	C	1.8	18.9	51.3	28.0	66	C	6.4	7.9	75.2	10.4
32	C	18.0	17.3	56.2	8.5	67	C	3.0	10.7	85.1	1.1
33	B	16.3	53.4	21.1	9.1	68	A	85.9	8.6	4.3	1.1
34	A	55.8	16.9	15.1	12.1	69	D	9.6	5.5	3.7	81.1
35	B	18.0	34.7	31.3	15.9	70	C	1.4	5.5	89.1	3.8

*The sum of the percentages for each question may be less than 100% because the No Response category is not included. This category does not exceed 0.2% for any question.

Table 23

June 1985 Social Studies 30 Diploma Examination Blueprint
Part B: Written Response

Description of Writing Assignment	Reporting Category	Proportion of Total Mark
One complete and unified essay in which the student integrates steps of the inquiry process in dealing with a given issue	1. Explanation of issue	5%
	2. Description and evaluation of an action or actions	10%
	3. Presentation and defence of a position on the issue	10%
	4. Quality of language and expression	5%
		30%

Table 24

Percentage Distribution of Scores on Social Studies 30 Part B

Score Scale Points	Reporting Category			
	Explanation of the Issue	Description & Evaluation of Action(s)	Defence of a Position	Quality of Expression
5 (Exceptional)	1.0	1.4	0.9	1.1
4 (Proficient)	10.8	12.8	9.1	13.3
3 (Satisfactory)	33.5	40.0	43.5	64.6
2 (Limited)	38.6	34.9	37.1	19.8
1 (Poor)	15.6	8.7	8.0	1.1
0 (Insufficient or no response)	0.6	2.1	1.4	0.2

SECTION 5: MATHEMATICS 30 DIPLOMA EXAMINATION

The Mathematics 30 Diploma Examination consists of both multiple-choice questions (worth 80% of the total examination mark) and written-response questions (worth 20% of the total examination mark).

Table 25

June 1985 Mathematics 30 Diploma Examination Blueprint

Subject Strand	Questions by Cognitive Level				Exam Emphasis
	Knowledge	Comprehension	Application	Open Search	
Trigonometry	2	1,3,4,7,8, 9,10	5,6,11, [1]	12,13	25%
Quadratic Relations	22	15,16,19,23	17,18,20, 21,[2]	14,24	22%
Sequences, Series, Limits	31	27,29,32,33	25,26,28, 30,[3]		18%
Statistics	34	36,[4]	35,37,38, 39,40	41	15%
Logarithms	43	42,44	45,47	46	9%
Polynomial Functions	52	48,49	50,[5]	51	11%
Exam Emphasis	9%	34%	46%	11%	100%

NOTE: Numbers in brackets [] indicate the written-response questions.

Provincial Averages

Table 26 contains percentage distributions for school-awarded marks, diploma examination marks, and final blended marks in Mathematics 30. Table 27 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages are based on raw scores, which are the number of marks obtained on each part of the examination. The total marks possible are identified for the written-response and multiple-choice components.

Averages are based on the results achieved by 9609 students. Differences between total averages and component averages are due to rounding.

Table 26

Provincial Percentages of A, B, C, and F Grades, Averages and Standard Deviation of Scores
Mathematics 30

Score	School-Awarded Mark	Diploma Examination Mark*	Final Blended Mark
A (80-100%)	17.7	15.2	15.1
B (65-79%)	30.6	24.5	28.1
C (50-64%)	37.9	33.0	40.0
F (0-49%)	13.8	27.3	16.7
Average (%)	64.3	60.4	62.7
Standard Deviation	14.7	17.1	14.9

*Table 26 gives the distribution of diploma examination marks after individual student scores were transformed. The transformation was established by considering expected student mark distributions, actual student mark distributions and standard setting results. Further information can be obtained by contacting Mr. James Jeffrey at the Student Evaluation Branch (427-5433).

Table 27

Multiple Choice and Written Response Raw Score Totals
Mathematics 30

Examination Section	Total Marks	Weighting (%)	Average	Standard Deviation
Written Response	13	20	4.2	3.4
Multiple Choice	52	80	31.2	8.9

Table 28

Provincial Raw Score Averages for Subtests
Mathematics 30

	Total Marks Possible			Raw Score Averages		
Subtest	Written Response	Multiple Choice	Total	Written Response	Multiple Choice	Total
Trigonometry	3	13	16	1.1	7.8	8.9
Quadratic Relations	3	11	14	0.7	5.8	6.5
Sequences, Series, Limits	3	9	12	0.4	5.3	5.7
Statistics	2	8	10	0.9	5.4	6.3
Logarithms	-	6	6	-	3.8	3.8
Polynomial Functions	2	5	7	1.1	3.0	4.1

Table 29

Provincial Raw Score Averages for Cognitive Levels
Mathematics 30

Subtest	Total Marks Possible			Raw Score Averages		
	Written Response	Multiple Choice	Total	Written Response	Multiple Choice	Total
Knowledge	-	6	6	-	4.0	4.0
Comprehension	2	20	22	0.9	12.4	13.3
Application	11	19	30	3.2	11.3	14.5
Open Search	-	7	7	-	3.6	3.6

Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 30. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 30

Results for Individual Multiple-Choice Questions
Mathematics 30

Item	Key	Distribution of Responses in %*				Item	Key	Distribution of Responses in %*			
		A	B	C	D			A	B	C	D
1	D	8.8	12.5	21.0	56.9	27	B	12.3	63.4	11.5	12.8
2	D	11.5	13.6	25.2	49.4	28	B	8.7	75.4	10.3	5.4
3	A	42.9	15.7	16.1	24.7	29	C	5.9	4.4	85.7	3.9
4	A	74.0	8.7	9.8	7.5	30	C	8.7	16.4	55.5	18.9
5	B	10.4	68.1	17.6	3.6	31	D	14.6	13.2	15.0	57.0
6	C	11.0	8.9	74.4	5.5	32	C	57.5	5.3	31.8	5.2
7	A	43.4	25.1	18.1	13.1	33	B	18.6	59.6	10.1	11.4
8	B	16.1	29.6	35.0	18.7	34	D	3.5	2.6	4.0	89.8
9	A	89.1	6.0	1.6	3.1	35	A	61.3	13.4	15.5	9.3
10	C	14.4	9.0	62.2	14.2	36	D	0.7	4.7	4.9	89.7
11	B	6.2	75.0	13.9	4.7	37	D	1.8	11.7	6.7	79.8
12	C	16.8	16.2	59.2	7.1	38	A	61.2	14.4	8.4	15.8
13	B	27.3	52.3	15.8	4.1	39	B	12.9	59.1	20.9	7.0
14	A	37.1	43.4	9.7	9.6	40	B	17.0	48.9	10.0	23.8
15	D	3.7	20.1	11.0	65.1	41	C	14.8	16.7	61.3	7.0
16	B	21.7	57.7	12.9	7.5	42	D	10.1	7.9	13.8	67.9
17	A	43.1	34.7	12.0	9.9	43	A	76.5	10.9	7.1	5.4
18	A	61.6	20.5	9.7	8.1	44	D	6.2	11.3	7.2	75.2
19	B	3.0	62.7	17.2	16.9	45	A	45.6	33.7	6.8	13.5
20	C	3.5	2.9	68.6	24.8	46	C	17.8	11.2	61.1	9.4
21	C	15.4	27.2	39.4	17.5	47	C	10.4	25.7	50.5	12.8
22	C	11.3	8.4	59.8	20.4	48	C	15.7	6.2	69.6	8.1
23	D	8.4	21.2	18.7	51.4	49	D	12.8	12.0	12.8	62.1
24	B	23.8	34.8	26.9	13.4	50	C	8.3	23.1	54.8	13.2
25	B	18.3	59.3	16.2	5.8	51	B	16.3	49.9	24.0	8.9
26	D	14.2	20.2	21.9	42.5	52	A	63.0	11.9	13.2	10.1

*The sum of the percentages for some questions is less than 100% because the No Response category is not included. This category does not exceed 1.8% for any question.

Table 31

Distribution of Marks for Written-Response Questions
Mathematics 30

Question	Percentage of Students Obtaining Each Mark				
	NR*	0	1	2	3
1	3.9	48.5	13.4	3.6	30.6
2	14.4	52.6	12.1	5.3	15.5
3	12.3	59.3	19.7	1.3	7.4
4	9.6	39.9	14.5	36.1	-
5	13.7	28.3	11.4	46.6	-

*No Response

The total number of marks possible, the average mark awarded to students, and the difficulty level for each written-response question are summarized in Table 32. The difficulty level is the average divided by total marks possible.

Table 32

Average Marks Awarded for Written-Response Questions
Mathematics 30

Question	Total Marks	Average	Difficulty Level
1	3	1.1	0.37
2	3	0.7	0.23
3	3	0.4	0.15
4	2	0.9	0.43
5	2	1.0	0.52

SECTION 6: BIOLOGY 30 DIPLOMA EXAMINATION

The Biology 30 Diploma Examination consists of both multiple-choice questions (worth 80% of the total examination mark) and written-response questions (worth 20% of the total examination mark).

Table 33

June 1985 Biology 30 Diploma Examination Blueprint

Subject Matter	Questions by Cognitive Level			Exam Emphasis
	Knowledge	Application and Understanding	Higher Mental Activities	
Cellular Processes	1,2,5,7	3,4,6	0	7%
Homeostatic Mechanisms	0	8,9,10	0	3%
Nutrition	11,12,15, 19,20,22	13,16,17,18, 21,[1]	14,23	17%
Circulation	24,28,29, 30,34*,35	27,31,32,33, [2]	25,26	16%
Gas Exchange	37,39,41	36	38,40	6%
Metabolism	0	42,43,44,45	0,[5]	7%
Excretion	46,49,51, 52	47,48,50	54,[4]	11%
Nervous & Hormonal Systems	53,58,60, 61,62,64, 65*	55,56,57,63, 66,68,70,71	67	16%
Movement	69	73	72,[6]	6%
Human Reproduction	77,78	59,74,75,76, 79,[3]	80	11%
Exam Emphasis	33%	48%	19%	100%

*Questions 34 and 65 were deleted from the examination.

NOTE: Numbers in brackets [] indicate the written-response questions.

In the table above, those questions identified with science process skills from the multiple-choice section of the examination are 3, 6, 12, 13, 25, 26, 40, 45, 56, 59, 68, and 70; those from the written-response section are 1, 2, 4, 5 and 6. In the examination, science process skills received an emphasis of 29%.

Provincial Averages

Table 34 contains percentage distributions for school-awarded marks, diploma examination marks, and final blended marks in Biology 30. Table 35 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages are based on raw scores, which are the number of marks obtained on each part of the examination. The total marks possible are identified for the written-response and multiple-choice components.

Averages are based on the results achieved by 8685 students. Differences between total averages and component averages are due to rounding.

Table 34

Provincial Percentages of A, B, C, and F Grades, Averages and Standard Deviation of Scores
Biology 30

Score	School-Awarded Mark	Diploma Examination Mark	Final Blended Mark
A (80-100%)	18.4	22.6	19.9
B (65-79%)	35.5	27.8	32.4
C (50-64%)	37.6	29.7	37.8
F (0-49%)	8.5	19.8	9.9
Average (%)	66.1	64.8	65.8
Standard Deviation	12.9	16.4	14.0

Table 35

Multiple Choice and Written Response Raw Score Totals
Biology 30

Examination Section	Total Marks	Weighting (%)	Average	Standard Deviation
Written Response	20	20	12.5	4.2
Multiple Choice	78	80	50.9	12.7

Table 36

Provincial Raw Score Averages for Subtests
Biology 30

Subtest	Total Marks Possible			Raw Score Averages		
	Written Response	Multiple Choice	Total	Written Response	Multiple Choice	Total
Cellular Processes	-	7	7	-	5.3	5.3
Homeostatic Mechanisms	-	3	3	-	2.1	2.1
Nutrition	4	13	17	2.4	8.1	10.5
Circulation	4	11	15	2.7	7.1	9.8
Gas Exchange	-	6	6	-	4.1	4.1
Metabolism	3	4	7	2.2	2.9	5.1
Excretion	-	8	8	-	4.4	4.4
Nervous & Hormonal Systems	3	15	18	1.8	9.9	11.7
Movement	3	3	6	1.7	1.6	3.3
Human Reproduction	3	8	11	1.6	5.4	7.0
Process Skills	17	12	29	10.9	8.2	19.1

Table 37

Provincial Raw Score Averages for Cognitive Levels
Biology 30

Cognitive Levels	Total Marks Possible			Raw Score Averages		
	Written Response	Multiple Choice	Total	Written Response	Multiple Choice	Total
Knowledge	-	31	31	-	20.8	20.8
Application and Understanding	7	37	44	4.3	24.2	28.5
Higher Mental Activities	13	10	23	8.2	5.8	14.0

Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 38. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 38

Results for Individual Multiple-Choice Questions
Biology 30

Item	Key	Distribution of Responses in %*				Item	Key	Distribution of Responses in %*			
		A	B	C	D			A	B	C	D
1	B	23.7	64.1	3.6	8.4	41	D	3.2	5.8	3.6	87.4
2	D	0.3	0.2	2.0	97.5	42	B	9.3	75.3	6.5	8.9
3	C	1.5	9.0	85.7	3.8	43	B	3.8	61.5	14.1	20.6
4	D	2.0	2.6	24.8	70.5	44	A	79.7	4.1	7.9	8.2
5	D	7.0	1.9	5.2	85.9	45	B	1.1	69.0	1.9	28.0
6	D	16.3	14.6	3.9	65.2	46	C	10.1	32.9	33.9	23.1
7	C	16.8	13.2	64.0	5.9	47	D	20.0	14.0	23.8	41.9
8	D	10.7	2.3	6.1	81.0	48	D	3.3	14.5	13.0	69.1
9	D	4.6	3.1	18.2	74.0	49	C	5.0	12.1	45.8	37.0
10	C	23.1	14.1	57.5	5.3	50	A	56.9	8.8	14.3	20.0
11	A	87.3	2.3	1.7	8.7	51	C	33.9	6.6	45.1	14.4
12	A	80.9	6.6	4.6	7.9	52	B	12.9	60.8	14.6	11.6
13	D	4.2	21.5	8.7	65.6	53	B	24.2	69.5	2.6	3.7
14	D	9.6	12.5	41.9	35.8	54	C	5.5	6.6	81.1	6.6
15	C	8.0	3.8	79.8	8.4	55	D	2.5	1.0	35.0	61.5
16	B	12.4	76.2	5.4	5.9	56	D	10.0	8.4	10.8	70.7
17	A	65.2	10.8	1.3	22.6	57	B	15.5	69.8	7.2	7.4
18	A	62.8	1.0	32.1	4.0	58	A	75.8	10.7	7.8	5.6
19	C	2.6	4.7	77.9	14.8	59	D	3.6	3.9	20.2	72.2
20	A	75.8	17.7	4.9	1.6	60	D	6.3	28.3	2.3	63.1
21	D	18.9	3.9	31.9	45.2	61	A	65.5	7.7	8.7	17.9
22	B	3.2	24.8	10.9	61.0	62	C	1.9	1.7	74.0	22.4
23	A	35.8	23.1	5.8	35.2	63	A	73.6	4.7	1.4	20.4
24	A	84.3	2.0	1.1	12.5	64	C	8.7	26.0	60.8	4.4
25	B	5.8	60.9	28.7	4.6	65	-	-	-	-	-
26	A	60.1	12.0	8.8	19.0	66	A	62.1	20.3	6.4	11.2
27	B	13.8	59.6	7.0	19.6	67	B	11.1	61.1	25.0	2.7
28	D	30.5	11.1	17.6	40.8	68	A	60.8	17.0	5.5	16.6
29	D	2.4	8.5	14.4	74.7	69	D	17.4	6.7	10.7	65.2
30	C	11.4	28.3	48.7	11.5	70	A	63.5	26.7	8.6	1.3
31	A	63.6	0.6	0.3	35.5	71	A	56.3	17.5	18.5	7.7
32	B	17.3	63.8	10.2	8.6	72	C	8.2	20.3	56.3	15.1
33	B	7.0	83.1	5.1	4.7	73	A	39.6	37.3	10.3	12.9
34	-	-	-	-	-	74	C	21.1	17.3	48.2	13.4
35	C	13.9	17.0	65.2	3.9	75	B	6.4	67.1	11.6	14.8
36	B	10.5	40.7	8.8	39.9	76	C	24.6	11.3	58.4	5.6
37	D	20.9	2.9	7.0	69.2	77	D	7.8	3.8	20.8	67.7
38	C	3.8	39.0	53.6	3.5	78	B	15.1	62.2	12.9	9.7
39	C	0.5	4.2	87.6	7.7	79	D	1.8	1.2	1.0	96.0
40	B	22.5	67.1	5.3	5.0	80	B	10.3	69.8	4.6	15.2

*The sum of the percentages for some questions is less than 100% because the No Response category is not included. This category does not exceed 0.2% for any question.

Table 39

Distribution of Marks for Written-Response Questions
Biology 30

Question	Percentage of Students Obtaining Each Mark					
	NR*	0	1	2	3	4
1	0.6	4.7	27.2	16.9	20.5	30.1
2	0.6	7.2	10.8	21.3	28.5	31.5
3	0.4	30.7	8.7	24.9	35.3	-
4	0.3	9.0	31.9	27.1	31.7	-
5	0.3	0.8	7.6	57.9	33.3	-
6	1.8	21.4	22.9	13.0	40.9	-

*No Response

The total number of marks possible, the average mark awarded to students, and the difficulty level for each written-response question are summarized in Table 40. The difficulty level is the average divided by total marks possible.

Table 40

Average Marks Awarded for Written-Response Questions
Biology 30

Question	Total Marks	Average	Difficulty Level
1	4	2.4	0.61
2	4	2.7	0.66
3	3	1.6	0.55
4	3	1.8	0.60
5	3	2.2	0.74
6	3	1.7	0.57

SECTION 7: CHEMISTRY 30 DIPLOMA EXAMINATION

The Chemistry 30 Diploma Examination consists of both multiple-choice questions (worth 80% of the total examination mark) and written-response questions (worth 20% of the total examination mark).

Table 41

June 1985 Chemistry 30 Diploma Examination Blueprint

Subject Matter	Questions by Cognitive Level			Exam Emphasis
	Knowledge	Application and Understanding	Higher Mental Activities	
Chemical Energetics	1,2,3,5, 6,9,10, 11	8,12,13,14, 15,16,17,18, [1]	4,7	33%
Acids and Bases	19,20,21, 22,25,27	23,24,26,28, 31,32,35,36, 37,[2]	29,30,33, 34	34%
Oxidation-Reduction	38,40,42, 47,49,55, 56	39,41,43,44, 45,46,48,51, 52,53,54	50,[3]	33%
Exam Emphasis	30%	54%	16%	100%

NOTE: Numbers in brackets [] indicate the written-response questions.

In the table above, those questions identified with science process skills from the multiple-choice section of the examination are 4, 29, 30, 33, 34, 35, 39, and 50; those from the written-response section are 1, 2, and 3. In the examination, science process skills received an emphasis of 31%.

Provincial Averages

Table 42 contains percentage distributions for school-awarded marks, diploma examination marks, and final blended marks in Chemistry 30. Table 43 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages are based on raw scores, which are the number of marks obtained on each part of the examination. The total marks possible are identified for the written-response and multiple-choice components.

Averages are based on the results achieved by 8399 students. Differences between total averages and component averages are due to rounding.

Table 42

Provincial Percentages of A, B, C, and F Grades, Averages and Standard Deviation of Scores
Chemistry 30

Score	School-Awarded Marks	Diploma Examination Mark	Final Blended Mark
A (80-100%)	21.3	20.1	19.4
B (65-79%)	35.5	24.8	31.0
C (50-64%)	33.8	30.1	36.1
F (0-49%)	9.4	25.1	13.4
Average (%)	66.8	62.4	65.0
Standard Deviation	13.8	17.7	15.0

Table 43

Multiple Choice and Written Response Raw Score Totals
Chemistry 30

Examination Section	Total Marks	Weighting (%)	Average	Standard Deviation
Written Response	14	20	5.7	3.7
Multiple Choice	56	80	37.9	9.5

Table 44

Provincial Raw Score Averages for Subtests
Chemistry 30

Subtest	Total Marks Possible			Raw Score Averages		
	Written Response	Multiple Choice	Total	Written Response	Multiple Choice	Total
Chemical Energetics	5	18	23	1.6	12.1	13.7
Acids and Bases	5	19	24	2.4	13.4	15.8
Oxidation Reduction	4	19	23	1.7	12.4	14.1
Process Skills	14	8	22	5.7	5.6	11.3

Table 45

Provincial Raw Score Averages for Cognitive Levels
Chemistry 30

Cognitive Levels	Total Marks Possible			Raw Score Averages		
	Written Response	Multiple Choice	Total	Written Response	Multiple Choice	Total
Knowledge	-	21	21	-	15.5	15.5
Application and Understanding	10	28	38	4.0	17.6	21.6
Higher Mental Activities	4	7	11	1.7	4.8	6.5

Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 46. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 46

Results for Individual Multiple-Choice Questions
Chemistry 30

Item	Key	Distribution of Responses in %*				Item	Key	Distribution of Responses in %*			
		A	B	C	D			A	B	C	D
1	B	14.5	76.3	4.1	5.0	29	D	5.5	6.0	22.9	65.6
2	B	10.0	72.4	7.3	10.3	30	C	7.2	23.4	63.4	5.9
3	A	83.0	5.3	7.7	3.9	31	C	4.0	5.5	89.2	1.3
4	B	21.2	57.0	15.1	6.1	32	B	7.5	79.2	7.7	5.5
5	C	11.3	3.9	74.6	10.0	33	B	22.5	58.1	10.7	8.6
6	B	14.6	75.3	8.8	1.3	34	C	0.7	5.6	88.5	5.3
7	A	74.0	5.4	10.5	10.0	35	C	3.1	8.2	82.9	5.7
8	C	20.4	6.2	65.0	8.1	36	D	14.4	4.3	39.8	41.5
9	C	11.0	24.1	61.8	3.0	37	B	24.3	41.5	17.7	16.2
10	C	2.3	7.8	84.2	5.7	38	A	88.6	4.5	3.1	3.8
11	C	17.4	7.1	72.7	2.8	39	B	12.5	65.1	12.0	10.3
12	B	10.5	60.2	23.2	5.9	40	A	70.3	4.6	21.5	3.7
13	D	18.8	11.8	15.1	53.8	41	C	2.3	5.6	88.3	3.8
14	B	12.4	78.5	4.5	4.4	42	A	75.1	6.3	15.5	3.0
15	D	10.7	15.9	24.7	48.5	43	C	27.5	16.8	43.9	11.6
16	B	15.4	71.0	8.9	4.6	44	B	49.2	45.0	3.3	2.4
17	A	47.9	10.9	20.4	20.5	45	B	22.1	62.2	4.0	11.6
18	B	10.1	48.6	28.6	12.0	46	D	8.9	24.6	25.3	40.7
19	D	9.1	17.7	5.2	68.0	47	C	7.7	4.8	81.4	6.1
20	C	6.5	12.4	77.0	4.0	48	A	59.1	15.6	21.6	3.7
21	D	4.4	4.6	8.6	82.3	49	D	7.4	10.2	11.0	71.2
22	D	11.7	18.1	17.8	52.4	50	A	76.7	13.4	6.4	3.3
23	A	72.7	7.7	3.4	16.1	51	D	6.8	17.1	7.1	68.9
24	C	2.3	24.3	67.4	5.9	52	C	5.6	7.1	72.1	15.1
25	D	1.9	3.9	12.5	81.7	53	C	7.9	9.6	71.2	11.2
26	D	22.6	1.8	5.5	70.1	54	B	37.8	48.9	7.1	5.9
27	A	86.8	5.6	4.8	2.8	55	A	56.1	18.9	9.0	15.7
28	B	7.0	69.7	16.3	6.9	56	B	13.7	53.6	22.6	9.3

*The sum of the percentages for some questions is less than 100% because the No Response category is not included. This category does not exceed 0.8% for any question.

Table 47

Distribution of Marks for Written-Response Questions
Chemistry 30

Question	Percentage of Students Obtaining Each Mark						
	NR*	0	1	2	3	4	5
1	4.3	32.8	16.0	21.0	10.6	7.6	7.6
2	3.9	11.2	14.9	19.5	21.2	21.2	8.2
3	18.6	20.9	19.8	3.2	8.7	28.9	

*No Response

The total number of marks possible, the average mark awarded to students, and the difficulty level for each written-response question are summarized in Table 48. The difficulty level is the average divided by total marks possible.

Table 48

Average Marks Awarded for Written-Response Questions
Chemistry 30

Question	Total Marks	Average	Difficulty Level
1	5	1.6	0.32
2	5	2.4	0.49
3	4	1.7	0.42

SECTION 8: PHYSICS 30 DIPLOMA EXAMINATION

The Physics 30 Diploma Examination consists of both multiple-choice questions (worth 80% of the total examination mark) and written-response questions (worth 20% of the total examination mark).

Table 49

June 1985 Physics 30 Diploma Examination Blueprint

Subject Matter	Questions by Cognitive Level			
	Knowledge	Application and Understanding	Higher Mental Activities	Exam Emphasis
Light	1,2,6,9, 11,12	3,5,7,10, [1]	4,8	23%
Electric and Magnetic Fields	13,15,17, 18,20,23, 25	14,16,21,22, 24,[2]	19,26, [2]	27%
EM Radiation	27,28,30, 34,35	29,31,32,36	33	15%
Structure of Matter	38,42,44, 45*	37,40,43, [3]	39,41	20%
Modern Physical Theories	46,50,56	47,49,51,52, 53,55	48,54	15%
Exam Emphasis	35%	50%	15%	100%

*Question 45 was deleted from the examination.

NOTE: Numbers in brackets [] indicate the written-response questions.

In the table above, those questions identified with science process skills from the multiple-choice section of the examination are 5, 7, 8, 16, 19, 23, 36, 41, 48 and 54; those from the written-response section are 1, 2, and 3. In the examination, science process skills received an emphasis of 34%.

Provincial Averages

Table 50 contains percentage distributions for school-awarded marks, diploma examination marks, and final blended marks in Physics 30. Table 51 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages are based on raw scores, which are the number of marks obtained on each part of the examination. The total marks possible are identified for the written-response and multiple-choice components.

Averages are based on the results achieved by 5014 students. Differences between total averages and component averages are due to rounding.

Table 50

Provincial Percentages of A, B, C, and F Grades, Averages and Standard Deviation of Scores
Physics 30

Score	School-Awarded Marks	Diploma Examination Mark	Final Blended Mark
A (80-100%)	23.7	19.5	19.8
B (65-79%)	37.5	29.2	35.0
C (50-64%)	31.7	30.2	35.7
F (0-49%)	7.2	21.0	9.5
Average (%)	68.3	63.7	66.3
Standard Deviation	13.3	16.2	13.8

Table 51

Multiple Choice and Written Response Raw Score Totals
Physics 30

Examination Section	Total Marks	Weighting (%)	Average	Standard Deviation
Written Response	14	20	6.8	3.5
Multiple Choice	55	80	37.1	8.6

Table 52

Provincial Raw Score Averages for Subtests
Physics 30

Subtest	Total Marks Possible			Raw Score Averages		
	Written Response	Multiple Choice	Total	Written Response	Multiple Choice	Total
Light	4	12	16	1.4	8.5	9.9
Electric and Magnetic Fields	5	14	19	1.8	9.2	11.0
EM Radiation	-	10	10	-	6.8	6.8
Structure of Matter	5	8	13	3.5	5.7	9.2
Modern Physical Theories	-	11	11	-	6.9	6.9
Process Skills	14	10	24	6.8	6.0	12.8

Table 53

Provincial Raw Score Averages for Cognitive Levels
Physics 30

Cognitive Levels	Total Marks Possible			Raw Score Averages		
	Written Response	Multiple Choice	Total	Written Response	Multiple Choice	Total
Knowledge	-	24	24	-	16.7	16.7
Application and Understanding	14	22	36	6.8	15.0	21.8
Higher Mental Activities	-	9	9	-	5.4	5.4

Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 54. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 54

Results for Individual Multiple-Choice Questions
Physics 30

Item	Key	Distribution of Responses in %*				Item	Key	Distribution of Responses in %*			
		A	B	C	D			A	B	C	D
1	D	13.5	4.7	26.3	55.5	29	A	81.1	4.7	3.5	10.6
2	B	13.7	74.8	4.1	7.3	30	C	4.8	8.5	80.6	6.0
3	C	3.1	22.9	72.4	1.6	31	B	15.1	58.1	18.0	8.4
4	A	78.4	12.1	6.2	2.9	32	C	2.4	3.2	92.8	1.6
5	A	59.6	20.6	14.9	4.8	33	C	5.8	22.2	45.0	27.0
6	C	7.3	6.2	81.1	5.4	34	A	85.2	2.4	8.3	4.1
7	B	4.2	63.0	18.2	14.5	35	D	28.6	4.3	19.5	47.6
8	D	17.5	1.5	3.8	77.1	36	A	38.4	17.1	18.8	25.6
9	B	13.5	69.4	5.1	11.9	37	A	79.6	13.1	3.5	3.7
10	A	55.6	20.6	14.3	9.4	38	D	23.1	6.3	3.7	66.9
11	D	3.1	14.7	5.6	76.7	39	C	7.5	21.3	58.3	11.9
12	B	5.5	87.0	6.2	1.3	40	D	1.9	3.8	8.8	85.4
13	C	9.7	13.0	49.3	28.0	41	A	42.2	29.0	19.3	8.8
14	D	8.7	5.4	4.9	80.7	42	C	15.4	8.5	67.4	8.7
15	D	21.3	8.7	11.7	58.4	43	B	4.5	82.1	8.8	4.5
16	A	73.9	6.7	16.9	2.6	44	D	11.7	3.1	3.1	82.0
17	B	9.4	59.5	2.4	28.6	45	-	-	-	-	-
18	D	2.2	12.0	11.1	74.6	46	C	2.6	2.5	84.7	10.2
19	C	3.3	10.9	64.2	21.5	47	C	12.3	10.4	64.0	13.1
20	A	52.4	19.4	4.6	23.5	48	D	13.9	13.9	18.4	53.7
21	B	9.3	88.2	2.1	0.3	49	D	10.7	8.4	9.5	70.8
22	A	61.1	18.9	14.5	4.5	50	D	13.4	11.4	8.7	66.4
23	B	0.5	93.1	2.1	4.3	51	A	73.6	12.5	9.1	4.7
24	D	21.4	36.9	11.0	30.6	52	B	22.5	45.1	19.7	12.1
25	D	7.4	14.8	24.6	53.1	53	C	3.8	12.8	75.0	8.2
26	C	10.1	4.0	81.8	3.9	54	D	20.1	22.3	23.1	33.7
27	B	9.8	65.3	8.4	16.5	55	B	7.8	63.0	21.0	7.9
28	C	1.4	4.4	82.3	11.9	56	D	8.7	11.1	20.6	58.6

*The sum of the percentages for some questions is less than 100% because the No Response category is not included. This category does not exceed 0.9% for any question.

Table 55

Distribution of Marks for Written-Response Questions
Physics 30

Question	Percentage of Students Obtaining Each Mark						
	NR*	0	1	2	3	4	5
1	5.6	27.7	24.4	22.5	5.3	14.6	-
2	0.9	1.1	5.7	12.6	21.5	32.1	26.1
3	13.5	23.5	16.2	11.7	13.5	9.5	12.1

*No Response

The total number of marks possible, the average mark awarded to students, and the difficulty level for each written-response question are summarized in Table 56. The difficulty level is the average divided by total marks possible.

Table 56

Average Marks Awarded for Written-Response Questions
Physics 30

Question	Total Marks	Average	Difficulty Level
1	4	1.4	0.36
2	5	3.5	0.71
3	5	1.8	0.36

SECTION 9: SUMMARY OF RESULTS

In Table 57, the provincial distribution of student marks in the diploma examination courses is summarized. The percentage distribution for the school-awarded mark, the June 1985 diploma examination mark, and the final blended mark achieved by students is shown for each of the A, B, C, and F grade categories. In addition, a comparison with the January 1985 diploma examination course results is provided.

Table 57

Distribution of Student Marks in Diploma Examination Courses
June 1985 Examination Administration and January 1985 Final Course Mark

Diploma Examination Course	June 1985			January 1985 Final Mark
	School-Awarded Mark	Diploma Examination Mark	Final Blended Mark	
English 30			N = 12 664	N = 7986
A (80-100%)	11.4	8.7	7.9	5.4
B (65-79%)	38.5	35.7	38.9	39.9
C (50-64%)	41.4	42.5	46.9	49.2
F (0-49%)	8.7	13.1	6.3	5.5
Average (%)	64.2	62.8	63.9	63.5
Standard Deviation	11.9	12.1	10.8	10.0
English 33			N = 6352	N = 4308
A (80-100%)	3.1	7.0	3.1	3.3
B (65-79%)	29.8	42.2	35.7	42.6
C (50-64%)	52.2	38.3	54.0	49.4
F (0-49%)	14.8	12.5	7.1	4.8
Average (%)	59.2	63.4	61.8	61.8
Standard Deviation	10.9	11.5	9.5	9.2
Social Studies 30			N = 10 977	N = 7760
A (80-100%)	14.0	9.9	10.4	12.0
B (65-79%)	38.3	35.5	37.7	37.5
C (50-64%)	39.5	35.8	42.6	41.8
F (0-49%)	8.2	18.7	9.3	8.7
Average (%)	65.0	62.1	63.9	64.4
Standard Deviation	12.2	13.6	12.0	12.2

(Continued)

Table 57

Diploma Examination Course	June 1985 School-Awarded Mark	June 1985 Diploma Examination Mark	June 1985 Final Blended Mark	January 1985 Final Mark
Mathematics 30*			N = 9609	N = 7954
A (80-100%)	17.7	15.2	15.1	20.0
B (65-79%)	30.6	24.5	28.1	32.5
C (50-64%)	37.9	33.0	40.0	35.4
F (0-49%)	13.8	27.3	16.7	12.1
Average (%)	64.3	60.4	62.7	65.7
Standard Deviation	14.7	17.1	14.9	14.9
Biology 30			N = 8685	N = 6230
A (80-100%)	18.4	22.6	19.9	17.6
B (65-79%)	35.5	27.8	32.4	35.3
C (50-64%)	37.6	29.7	37.8	38.1
F (0-49%)	8.5	19.8	9.9	9.0
Average (%)	66.1	64.8	65.8	65.7
Standard Deviation	12.9	16.4	14.0	13.2
Chemistry 30			N = 8399	N = 5955
A (80-100%)	21.3	20.1	19.4	19.8
B (65-79%)	35.5	24.8	31.0	33.9
C (50-64%)	33.8	30.1	36.1	36.5
F (0-49%)	9.4	25.1	13.4	9.9
Average (%)	66.8	62.4	65.0	66.1
Standard Deviation	13.8	17.7	15.0	14.0
Physics 30			N = 5014	N = 2962
A (80-100%)	23.7	19.5	19.8	20.5
B (65-79%)	37.5	29.2	35.0	35.8
C (50-64%)	31.7	30.2	35.7	34.7
F (0-49%)	7.2	21.0	9.5	9.0
Average (%)	68.3	63.7	66.3	66.7
Standard Deviation	13.3	16.2	13.8	13.9

*June 1985 Diploma Mathematics Examination scores were transformed.